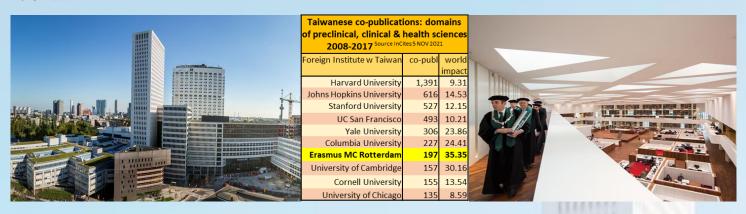
介紹 Erasmus MC



Erasmus University Medical Center, 被稱為 Erasmus MC: Erasmus 大學的醫學院及其 3 所大學醫院全部整合到一個園區中,並由一個執行委員會領導。該教育中心於 2012 年開業,擁有 400 個學習場所和 40 個教學與演講室,最多可容納 6,000 名學生,並於 2013 年因其建築風格而獲獎。2018 年,老醫院被最先進的單人病房,1,000 臥室醫院所取代。 Erasmus MC 致力於通過研究和教育實現健康的人口和卓越的醫療保健 (www.erasmusmc.nl).

病人護理: Erasmus MC 只滿足於最好的護理,只有單間病房(VIP 醫院)以加速其醫療創新和使用最新、最具創新性的材料和程序治療患者的能力 https://www.youtube.com/watch?v=agYQOLrhmrQ

研究與創新: Erasmus MC 在各個臨床領域一直名列全球前 11-55 位,在生物醫學科學領域排名前 30 位(US News Subject Rankings 2022, Nature Index Biomedical Sciences 2019). 重要的是,其在臨床前、臨床和健康科學領域的研究論文的世界影響力為 2,55,位居全球排名榜首,僅次於哈佛(2,37 見第 2 頁,左表)。 Erasmus MC 的總體研究目標是將實驗及研究發現轉化為臨床應用,並涵蓋從臨床前研究,到臨床,再到健康科學研究的所有領域。

教育培訓: Erasmus MC 提供 BSc, MSc, PhD 和 Residency 計劃,以培訓下一代醫學從業人員和研究人員。它是歐洲最大的醫學院之一,擁有約 2,500 名醫學生,每年有 220-250 名博士畢業。 其<mark>醫學教育</mark>是,33%的醫學生發表過論文,70%在國外,20%選擇了醫學博士,(成為臨床醫生和科學家),非常出色。同樣,它希望博士生在畢業考試之前擁有 4 種或以上的研究發表(在研究領域排名前 25%的期刊內)。所有博士生在入學時均擁有 MSc, MD 或 DVM,並且大多數人具有個人獎學金或由研究補助金支付。

創新教育計劃: Erasmus MC 和 Delft University of Technology 是世界上第一個提供納米生物學(Nanobiology)BSc-MSc 計劃的人,此跨領域學程結合了生物,物理,數學及電腦運算,所以它彌合了生命科學與技術之間的鴻溝。與技術大學的這種緊密合作產生了更廣泛的研究合作,並更多地關注社會上的直接應用。

監督率: 我們擁有約 750 名註冊醫學專家,約 1000 名居民和約 1500 名科學人員(加上 600 名博士後),而約有 1,250 名博士生,我們擁有世界上最好的主管比例之一(博士生至少有兩名主管)。

Erasmus MC 和歐洲: 從研究發表數量和源自 EC 資助的研究(即 FP7 和 Horizon 計劃)的研究發表數量衡量,Erasmus MC 屬於歐盟 10 大醫學院校,並且是歐洲大陸上最成功的歐洲醫學院之一(Horizo n2020 主題健康、人口變化與福祉; 見右表第 2 頁)。因此,它是通向歐洲研究網絡的誘人門戶,無論您的職業是在歐洲還是國外,這都是畢業後的一項好處。

與台灣的合作: Erasmus MC 以其長期的合作和對合作夥伴的忠誠度而聞名。這種理念在高質量的研究合作中得到了體現。這通常要比台灣與更著名的合作夥伴(請參閱本頁頂部的表格)所享受的研究質量要好得多,而重要的是您一起發表的論文。因為合作比短暫的機會更為重要,所以我們更喜歡從事中荷合作和/或將荷蘭合作網絡帶回台灣的台灣博士研究生。

<u>科技部</u>龍門計劃: Erasmus MC 為<u>龍門計劃</u>的主辦機構之一,增加了與<mark>感興趣的台灣科學</mark>家合作的另一種方式。

台灣教育部核准及補助的 <u>PhD</u> 獎學金: 有興趣前往荷蘭 Erasmus MC 的學生,可經由此教育部連結 (<u>Taiwanese Ministry of Education</u>) 申請全額補助獎學金。

Erasmus MC 的博士課程 - 概述

選擇一所大學攻讀博士課程是以研究為導向的職業生涯中最重要的一步。它是大學提供的最高教育課程,博士培訓的結果決定了您職業生涯的下一步。由於博士學位本質上是一項研究培訓和教育計劃,因此您想報名參加的研究所的研究發表的質量非常重要。我們還注意到,歐洲和非歐洲大學代表團始終重視獲得歐洲研究資助。因此,如果您有在國際背景下從事職業的想法,請知道 Erasmus MC 在其研究論文的質量以及獲得歐洲研究資助(所謂的 Horizon2020 資助、主題健康、人口統計學)方面有著良好的記錄與福祉。

Preclinical, clinical & Health Sciences 2016-2020				
InCites Clarivate dbase as of Oct, 5th, 2021				
University or Med School only* publ world impact				
Erasmus MC*	24,271	2.55		
Erasmus University Rotterdam	25,746	2.52		
UCLA DG Med School*	15,863	2.47		
Harvard University	139,589	2.37		
Stanford University	40,396	2.32		
Johns Hopkins University	63,010	2.27		
Johns Hopkins Medicine*	22,879	2.27		
Harvard Univ Med School*	70,795	2.27		
UC San Francisco	47,712	2.22		
Yale University	34,241	2.21		
UC Los Angeles (UCLA)	37,742	2.21		
University of Chicago	16,265	2.13		

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Organization, country	Net contri-	project
(*med school only)	bution (in €)	participation
INSERM, FR	115.160.351	122
Univ of Oxford, UK	76.643.642	74
LSHTM, UK	74.201.528	26
Erasmus MC*, NL	61.255.042	72
Karolinska Inst*., SE	61.171.462	89
Radboud Univ, NL	57.262.658	52
UCL, UK	55.748.799	63
UMC Utre cht*, NL	53.889.035	50
ICL, UK	50.417.535	43
KCL, UK	49.689.847	49
KU Leuven, BE	45.388.558	68
LUMC*, NL	43.742.800	56
CoEPI, NO	36.000.000	2
Univ of Cambridge, UK	32.761.296	47
Charite Univ*, DE	32.291.420	46
Univ of Newcastle, UK	31.686.153	39

左表: 世界影響: 這組研究發表的引用影響指數與世界影響指數相比(世界平均值為 1,00)。 InCites-Clarivate 出版物: 2021 年 10 月 5 日在 InCites 數據庫中發現的 2016-2020 年臨床前、臨床和健康科學聯合領域的研究發表 右表: 歐洲研究資助計劃 "地平線 2020"中最成功的組織——主題健康、人口變化與福祉,根據 2020 年 9 月 23 日在歐盟儀表板上獲得的歐元金額排名。Erasmus MC 是第一所大陸醫學院,自法國的 INSERM 是一個全國性組織,另外兩個成功的組織是英國。

Erasmus MC 博士課程的目標是使您成為一名獨立的研究人員,能夠根據科學證據來解決複雜的問題。畢業生將具有評估科學研究的能力,並朝著成為生物醫學學者的方向邁出了重要的一步。博士生最適合成為大學醫學中心、研究型大學、研究機構的未來(臨床)研究人員,和/或填補工作人員和政策職位,例如管理生物醫學大學、醫院和其他醫療保健組織、生物醫學和製藥公司、部委等等。

我們**教育理念**的核心是,良好的科學培訓需要主動學習。這意味著我們以小組甚至有時單獨授課的方式來教授博士和研究型碩士生,並且以綜合方式教授理論知識和實踐技能。因此,激發學生積極地使用他們新獲得的知識,這既嵌入了他們的知識,又提高了他們的研究質量。融合是提高我們各級教育的多學科性和跨學科性的重要驅動力。學生向在各自領域處於領先地位、具有國際經驗且其研究小組與其他(國際)國家研究小組合作的教師學習。

一個典型的博士學位課程將花費 4 年,並且候選人必須擁有其理學碩士,醫學或 DVM 學位。在健康科學領域,應聘者將其博士學位研究與健康科學專業碩士相結合。候選人的雅思成績必須達到 7.0 或托福成績達到 100,但在攻讀博士學位期間,他們的英語寫作和演講技巧會得到進一步提高。

培訓和指導:作為博士研究生,您將註冊 Erasmus MC 研究生學院,該研究生學院提供通用和高度專業化的課程。然而,博士課程是高度個性化的,在最初的幾個月內,您將與您的導師一起開發最適合您的科學需求以及您理想職業道路的課程。重要的是,我們還希望您能夠獨立工作(我們會訓練您這樣做),並且敢於主動,我們會激發您競爭旅遊船,海報獎或進行其他相關的課外活動。

- 您將進行一項獨立的科學研究並將結果呈現在論文中。
- 您將受到一名全職教授的監督,並由一名或兩名共同指導教授提供支持
- *您將參加*至少 30 個 EC 點的課程,<mark>研討會和會議(您可</mark>以從 Grad School 的 150 門課程中選擇,並且可以參加 Erasmus MC 以外的課程)
- 您將參加一個多學科,跨國和資助驅動的最新研究環境
- 根據您的項目,有可能出國(研究訪問)在另一個環境中學習

您的博士學位論文:每個研究項目都不同,每個博士生都不同,知識和實驗室經驗也可能不同,因為博士生來自不同的大學。但是,我們為擁有世界上最高的博士學位考試要求之一而感到自豪。當您邁向職業生涯的下一步時,這將為您帶來巨大的優勢。有關獲得博士學位後成果的範例,請查看下表:

在 2019 年從伊拉斯姆斯大學畢業的最後 10 名外國博士研究生的產出

country	publications	conferences abroad	honors & awards	teaching
Brazil	5 publications in top 3 journals, 1x top 25%, 1x other	6 conference visits + 1 conference organization	1 grant, editorial board, 4x coordinator research projects	lecturer, 4 MSc interns,
Poland	2x top 10, 2x top 25%, 1x other	3 conference visits	1 scholarship, 2 travel grants	3 BSc + 4 MSc interns
Romania	1x top 10, 3x top 25%, 2x other, 2 book chapters	1 conference + 2x course organizer, 1x course co-chairman	1 grant, editorial board	1 MSc intern
U.K.	4x top 25%, 6x other	1 course, 4 conferences	4 awards, board AAV	teaching assistant, 1 MSc intern
P.R. China	2x top 3, 1x top 5, 1x top 25%, 1 other	3 conference visits, 1 research visit	1 scholarship + 5 awards	1 MSc intern
Sudan	1x top 3, 4x top 5, 1x top 10, 2x top 25%, 12x other	6 courses/workshops, 23 conferences	2 grants	not reported
Italy	2x top 3, 1x top 5, 4x top 25%, 2x other, 2 in preparation	1 research visit,2 workshops, 7 conference presentations	1 scholarship + 3 awards	1 MSc intern
India	3x top 25%, 8x other	8 conferences	2 awards	teaching assistant, 2 MSc interns
Mexico	1x top 10, 11x top 25%, 1x top 50% journal	4 courses, 6 conferences	1 scholarship + 5 awards, JHP Editorial Board EHF	teaching assistant, 1x intern JMS
Syria	1x top 1, 9x top 25%, 3x other	8 conferences	1 award	2x teaching assistant med school, 1x teaching nurse school
U.S.A.	2x top 3, 1x top 10, 14x other	12 conferences & workshops	not reported	5x teaching at courses, 2x advisor, 1x MSc intern
Germany	4x top 3, 1x top 10, 3x top 25%,	5 conferences, 3 courses	not reported	lecturer at med and at nursing school, residents, 2x med and 1x MSc intern
Morocco	1x top 5, 2x top 25%, 5x other	10 conferences, 6 courses	1 grant	not reported
Indonesia	1x top 3, 4x top 5, 3x top 10 , 4x top 25%, 3x Top 50% journals	1 course, 4 conferences	1 grant + 4 awards	teaching at Med School and MSc Program, 1 intern BSc student
Thailand	3x top 25%, 1x submitted, 2x in preparation	13 conferences	5 travel grants, co-chair, committee member at national science days	teaching endocrinology course

圖註: <u>country</u> - 博士畢業生的原籍國, <u>publications</u> - 博士學位論文發表,其質量由該期刊在研究生研究領域中的排名來表示, <u>conferences abroad</u> - 國外會議,課程和研究訪問的次數, <u>honors & awards</u> - 獲得的贈款和獎勵,學者或旅費,委員會或董事會成員的數量, <u>teaching</u> - 博士研究生開設的課程和對學生的指導.

在您獲得論文博士學位後,您與我們的聯繫將不會停止:熟悉我們的員工和我們的研究並了解西方研究資助的動態,您將從研究生轉變為有價值的海外同事和研究夥伴:表格第2頁顯示了我們與國外科學家的合作出版物所獲得的引用平均得分高於在世界各地擁有一些大學的外國科學家的引用數量。這是只有您才能做到的,因為我們許多成功的合作都是與我們以前的校友合作。

如何申請博士學位

如何使用此空缺手冊: 本手冊概述了 Erasmus MC 幾個選定部門中與台灣實驗室合作或正在尋求合作的各個實驗室的博士生職位。空缺以通用方式編寫,目的是使您對他們研究的主題有所了解,但也可以讓您靈活地提出一些與主題相關的建議。有關更多信息或問題,您可以隨時通過電子郵件聯繫相關教授(職位空缺包括相關教授的聯繫數據)或通過 Erasmus MC 的研究發展辦公室 RDO。

寫動機或求職信:這些職位空缺有簡短的研究描述,並顯示了一些研究發表。這是進一步閱讀的來源。主管希望博士候選人寫一封好的<u>動機信函</u>,將他們的興趣描述為教授的研究興趣,以及候選人之前獲得的經驗將如何匹配或添加到博士項目中。

由於 Erasmus MC 的幾乎所有博士生的職位都是基於研究資助或自己的博士獎學金,因此建議您一下,當您被教授錄取時,您將申請博士學位獎學金。這將是您教育部的博士獎學金計劃或其他可用的獎學金,例如基於大學或大學醫院的博士獎學金。獲得獎學金可能是一種要求,但我們認為這是一個額外的步驟,可以作為您職業生涯後期質量的證明。這也是您未來的主管將在您的獎學金申請的研究部分中為您提供幫助的原因。

您被教授錄取了,**現在怎麼辦**? 一旦您接受了面試(或多次面試)並被錄取,在大多數情況下 ,您將申請獎學金。您的主管將為您的博士獎學金申請的科學描述提供幫助,並且通常您需要獲得獎 學金申請的錄取通知書。您的主管可以通過 RDO 獲得這些信息。

提交申請後,不久之後,您的獎學金將被授予,您將通知未來的指導教授。他們將把您,他們的新博士生,通知人事和人力資源部(HR),其他一些 Erasmus MC 員工也會與您聯繫。通常,HR 只會在您預計到達的兩個月之前與您聯繫。

人力資源所需的文件,以準備您的申請和註冊

- o 護照的彩色複印件(所有書面和蓋章頁);
- o 在荷蘭承保的醫療保險證明;如果您沒有保險,則可以在荷蘭後安排醫療保險;
- o獨立證明:例如津貼,助學金,贊助,定期付款,任命書或僱傭合同。
- o 證明您具有進行研究的適當資格的證書副本;您的文憑或大學證書。文憑或大學證書必須由公 證人或市政當局批准;
- o由您的指導教授簽名的研究建議書的副本。

除上述強制性文件外, 還建議提交;

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o 出生證明的副本,該副本經合法化或帶有加蓋公章的印章,用於確定市政個人記錄數據庫(GBA)的個人詳細信息。

注意: 這些文件必須由官方翻譯人員翻譯成英文, 荷蘭文或法文。

Department of Gastroenterology & Hepatology

School/Department:	Department of Gastroenterology and Hepatology, Erasmus MC
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	Most relevant recent publications:
	1.Li P, de Vries AC, Kamar N, Peppelenbosch MP, Pan Q. Monitoring and managing SARS-CoV-2 evolution in immunocompromised populations. <i>Lancet Microbe</i> . 2022 May;3(5):e325-e326.
	2. Sleutjes JAM, Roeters van Lennep JE, van der Woude CJ, de Vries AC . Lipid Changes After Induction Therapy in Patients with Inflammatory Bowel Disease: Effect of Different Drug Classes and Inflammation. <i>Inflamm Bowel Dis</i> . 2022 May 19:izac100.
	3. Goetgebuer RL, Kreijne JE, Aitken CA, Dijkstra G, Hoentjen F, de Boer NK, Oldenburg B, van der Meulen AE, Ponsioen CIJ, Pierik MJ, van Kemenade FJ, de Kok IMCM, Siebers AG, Manniën J, van der Woude CJ, de Vries AC. Increased Risk of High-grade Cervical Neoplasia in Women with Inflammatory Bowel Disease: A Case-controlled Cohort Study. <i>J Crohns Colitis</i> . 2021 Sep 25;15(9):1464-1473.
	4. Beelen EMJ, Nieboer D, Arkenbosch JHC, Regueiro MD, Satsangi J, Ardizzone S, López-Sanromán A, Savarino E, Armuzzi A, Janneke van der Woude C, de Vries AC . Risk Prediction and Comparative Efficacy of Anti-TNF vs Thiopurines, for Preventing Postoperative Recurrence in Crohn's Disease: A Pooled Analysis of 6 Trials. <i>Clin Gastroenterol Hepatol</i> . 2021 Oct 20:S1542-3565(21)01134-4.
	5. Parikh K, Zhou L, Somasundaram R, Fuhler GM, Deuring JJ, Blokzijl T, Regeling A, Kuipers EJ, Weersma RK, Nuij VJ, Alves M, Vogelaar L, Visser L, de Haar C, Krishnadath KK, van der Woude CJ, Dijkstra G, Faber KN, Peppelenbosch MP . Suppression of p21Rac signaling and increased innate immunity mediate remission in Crohn's disease. <i>Sci Transl Med</i> . 2014 Apr 23;6(233):233ra53.
Project Title:	Understanding the physiopathology and improving treatment of inflammatory bowel disease
Abstract:	Inflammatory bowel disease (IBD) is the inflammatory conditions of the colon and small intestine, Crohn's disease and ulcerative colitis being the main types. IBD is a complex disease which arises as a result of the interaction of environmental and genetic factors leading to immunological responses and inflammation in the intestine. The conventional treatments aim at controlling symptoms through pharmacotherapy, including aminosalicylates, corticosteroids, immunomodulators, and biologics, as well as surgical resection if necessary. However, disease recurrence is almost universal after resection. A considerable fraction of patients do not respond to available pharmacological treatments or lose response, which calls for better understanding the pathogenic mechanisms and developing new therapeutic strategies. We aim to achieve this goal through a translational approach by joining our strong expertise from the IBD clinic and the research laboratory. We will explore human intestinal organoids for modeling IBD, studying the physiopathology, and discovering new therapeutics.
Requirements of candidate:	 We are looking for a highly motivated, hardworking student to join our very international team. Our strength is in using team work to tackle large scientific questions and thus requires a student with good communication skills. Master degree or MD Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal) English language requirement: English speaking countries & Netherlands: no requirement Other countries: IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs).

Department of Immunology

School/Department:	Department of Immunology, Erasmus MC	
Supervisor information:	 Dr. Christopher Schliehe, Assistant Professor Email: c.schliehe@erasmusmc.nl Website: https://www.erasmusmc.nl/immu/research/air Grants: NIH grant (R21, National Institutes of Health, USA) as principal investigator in 2022 (275,000 Euros / 2 year) NWO-XS grant (Dutch Research Council) in 2021 (50.000 Euros / 1 year) KWF research grant (Dutch Cancer Society) in 2019 for Prof. Katsikis; co-Principal Investigator (536,000 Euros / 3 years) EU Horizon 2020 Marie Skłodowska-Curie COFUND Postdoc Fellowship LEaDing program in 2019 (63.000 Euros / 2 years) Most important publications: Nature Reviews Immunology, 10.1038 (2023) PMID: 37783860 Journal of Immunology 8, 1203-1215 (2023) PMID: 37638825 Leukemia 36, 687-700 (2022) PMC8885418 Frontiers in Immunology 13, 10:1367 (2019) PMC6593301 	
	Frontiers in Immunology 8, 1920:1-13 (2018) PMC5766668 PLoS Pathogens 13, e1006758:1-20 (2017) PMC5738113 Scientific Reports 12, 7:11289 (2017) PMC5595927 Immunity 17, 974-86 (2015) PMC4658338 Nature Immunology 16, 67-74 (2015) PMC4320687 Journal of Virology 86, 9782-9793 (2012) PMC3446605 Journal of Immunology 187, 2112-2121 (2011) 10.4049/jimmunol.1002084	
Project Title:	Investigating antigen presentation on MHC class I molecules to improve cancer immunotherapy	
Abstract	Cytotoxic T-lymphocytes (CTLs) are the most essential effector cells needed for efficient immune responses against cancer. They recognize antigenic peptides presented on molecules of the major histocompatibility complex (MHC) class I and thereby screen the intracellular content of cells for signs of infection and/or transformation. The team of Dr. Schliehe is embedded in the Department of Immunology and has a focus on antigen presentation and immune regulation in the context of immunotherapies . It combines a large spectrum of experimental approaches (including classical immunological techniques, <i>in vivo</i> models, genetic screens, mass spectrometry, and chemical immunology) to elucidate the molecular mechanisms involved in direct- as well as cross-presentation of antigens on MHC class I molecules. The offered PhD project will include both hypothesis-driven research as well as unbiased genetic screens to investigate novel aspects of antigen expression, processing and presentation.	
Requirements of candidate:	 Category: Fundamental Research We are looking for a highly motivated, hardworking student to join our international team. Our strength is in using teamwork to tackle large scientific questions and thus requires a student with good communication skills. Master degree or MD (we especially encourage students with a background in fundamental research to apply) Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we will help with the scientific part of your scholarship proposal) English language requirement: English speaking countries & Netherlands: no requirement Other countries: IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs) 	

Department of Internal Medicine – Pharmacology

School/Department:	Department of Internal Medicine, Erasmus MC
Supervisor information:	Prof. Dr. Antoinette Maassen van den Brink
	Email: a.vanharen-maassenvandenbrink@erasmusmc.nl
	Website: https://pharma.erasmusmc.nl/migraine.html
	• Grants:
	- Dutch Research Council: Veni (2004), Vidi (2011), Vici (2020)
	- Various Industry grants
	- Dutch Heart Foundation, Dutch Brain Foundation, Berlin Institute of Health
	Most important publications:
	 de Vries, T., Boucherie, D.M., van den Bogaerdt, A., Danser, A.H.J., MaassenVanDenBrink, A. (2023). Blocking the CGRP Receptor: Differences across Human Vascular Beds. Pharmaceuticals (Basel). 2023;16(8):1075.
	 Van Casteren, D.S., Kurth, T., Danser, A.H.J., Terwindt, G.M., MaassenVanDenBrink, A. (2021). Sex differences in response to triptans: A systematic review and meta-analysis. <u>Neurology</u>, 96:162-170.
	3. MaassenVanDenBrink, A., Reekers, M., Bax, W.A., Ferrari, M.D., Saxena, P.R. (1998). Coronary
	side effect potential of current and prospective antimigraine drugs. <u>Circulation, 98:25 30.</u> 4. MaassenVanDenBrink, A., Meijer, J., Villalón, C.M., Ferrari, M.D. (2016). Wiping out CGRP -
	potential cardiovascular risks. <u>Trends in Pharmacological Sciences</u> , <u>37:779-88</u> .
	5. De Vries, T., MaassenVanDenBrink, A. (2019). Monoclonal antibody targeting CGRP in difficult-to-treat migraine. <u>Nature Reviews Neurology</u> , 15:688-689.
	6. Al-Hassany, L., MaassenVanDenBrink, A. (2020). Targeting CGRP in migraine: a matter of
	choice and dose. Lancet Neurol, 19:712-713.
	7. Mulder, I.A., Li, M., de Vries, T., Qin, T., Yanagisawa, T., Sugimoto, K., van den Bogaerdt, A.,
	Danser, A.H.J., Wermer, M.J.H., van den Maagdenberg, A.M.J.M., MaassenVanDenBrink, A., Ferrari, M.D., Ayata, C. (2020). Anti-migraine CGRP receptor antagonists worsen cerebral
	ischemic outcome in mice, <u>Ann Neurol, 88:771-784</u> .
Project Title:	Migraine: the role of CGRP and cardiovascular safety of CGRP (receptor)
_	blockade
Abstract:	Background : Migraine is a highly disabling and prevalent disorder, occurring 2-3 times more often in females than in males. A novel class of antimigraine drugs
	consists of antibodies against Calcitonin Gene-Related Peptide (CGRP) or its
	receptor, as well as small molecule CGRP receptor antagonists (gepants). While
	blocking CGRP may be a big advantage for migraine patients without a good
	response to current therapies, the potential risks of 'wiping out' the vasodilator
	CGRP, which is thought to have a rescue function in case of threat of ischemia,
	should be well studied. Further, the role of CGRP, related peptides and their
	receptors may be different in male and female migraine patients, which is
	relevant in view of the predominance of migraine in females.
	Project description: The current PhD project will focus on the (neuro)vascular role of CGRP,
	with a special emphasis on the role of sex hormones on the CGRP-ergic system. We will use
	animal in vivo models as well as human blood vessels in vitro. Depending on the interest of the
	PhD student, also human in vivo and/or epidemiological studies could be part of this project.
	Expected result : A typical Dutch PhD thesis, containing multiple published papers in top pharmacological or neurological journals. The PhD student will work with an extensive team of
	basic scientists, clinicians, and technicians, allowing him/her to cover both preclinical and clinical
	research.
	PhD student profile: Ideally, the student has a solid background in physiology and
	pharmacology, and some experience with animal research, biochemistry and molecular biology. He/she does not need to be a clinician.
Requirements of	 We are looking for a highly motivated, hardworking student to join our very international team. Our strength is in using team work to tackle large scientific questions and thus requires a student with good communication skills.
candidate:	o Master degree or MD
	 Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal)
	o English language requirement:
	English speaking countries & Netherlands: no requirement Other population (ISLTS 7.0 (min 6.0 for all subs), TOSS 1.00 (min 30 for all subs).
	O Other countries: IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs)

Department of Molecular Genetics

Department:

Supervisor information:

World no 30 Biomedical Sciences



Miao-Ping Chien received her PhD in chemistry and biochemistry from the University of California, San Diego in 2013, and went on to do a postdoc at Harvard University, working on technology development for biology (combining biophysics, computation and optical instrumentation). She joined Erasmus MC as a group leader in June 2017 and became a principal investigator at Oncode Institute in 2019. Her current research focuses on developing and applying multidisciplinary technologies (advanced microscopy and imaging, computation, single cell technology, bioinformatics, (photo)chemistry) to investigate the underlying mechanisms of tumorigenesis, particularly of rare cancer-driving cells. She is also a founder of UFO Biosciences, which aims to enable better cancer care by creating treatment options for rare, cancer-driving cell populations that escape traditional treatment.

Department of Molecular Genetics at Erasmus MC

Dr. Miao-Ping Chien, <u>m.p.chien@erasmusmc.nl</u>, <u>http://www.mpchienlab.org/</u> **Selected Grants:**

2023 KWF-TKI Grant

2022 NWO Vidi award (NWO Talent Scheme)

2022 KWF synergy grant

2021 Oncode Technology Development Grant

2020 Ammodo Science Award Scheme)

2020 Erasmus-TU Delft Convergence Grant

2019 Oncode Institute Junior Fellow 2018 Erasmus MC Fellowship 2018 CancerGenomiCs.nl Junior Pl's Grant 2018 Dragon Gate Grant (Taiwan MoST) 2017 NWO Veni award (NWO Talent

2017 CancerGenomiCs.nl Junior Fellow

Selected publications:

- 1.You, Li*, Su, P.R.*, Betjes, M.*, et al., **Chien, M.P**. "<u>Linking the genotypes and phenotypes of cancer cells in heterogenous populations via real-time optical tagging and image analysis", **Nature Biomedical Engineering**, 2022</u>
- 2.Su, P.R., et al., **Chien, M.P.**, "<u>Microscopy-based single-cell proteomic profiling reveals heterogeneity in DNA damage response dynamics</u>". **Cell Reports Methods**, 2022
- 3. Smit M., et al., **Chien M.P.** "<u>Spatially annotated single cell sequencing for unraveling intratumor heterogeneity</u>", **Frontiers in Bioengineering and Biotechnology**, 2022
- 4.Li L et al. "A Comprehensive enhancer screen identifies TRAM2 as a key and novel mediator of YAP oncogenesis." **Genome Biology**, 2021, 22, 54,
- 5.**Chien M.P** et al. "Photoactivated voltage imaging in tissue with an archaerhodopsin-derived reporter", **Science Advances**, 2021: Vol. 7, no. 19, eabe3216
- 6. Werley C.A., et al <u>"An ultrawidefield microscope for high-speed fluorescence imaging and targeted optogenetic stimulation."</u> **Biomedical Optics Express**. 2017, 8(12), 5794-5813.
- 7. Chien M.P., et al. <u>"Enzyme-Directed Assembly of Nanoparticles in Tumors Monitored by In Vivo Whole Animal and Ex Vivo Super Resolution Fluorescence Imaging."</u> J Am Chem Soc. 2013 Dec 18;135(50):18710-3.
- 8. Chien M.P., et al. <u>"Enzyme-Directed Assembly of a Nanoparticle Probe in Tumor Tissue."</u>
 Advanced Materials. 2013, July 12 (25): 3599-3604.

Investigation of tumorigenesis via advanced imaging and single cell -omics analysis

The Chien Lab is looking for self-motivated PhD students with a strong interest in working in a multidisciplinary lab. In our lab, we develop single cell technologies combining optical, biomedical and bioinformatics methods to address biological questions, particularly in cancer biology and immuno-oncology.

The candidate will have a chance to work on wet-lab projects, dry-lab projects or a combination of these two. For the wet-lab projects, the candidate can apply the technologies developed in Dr. Chien's group, including advanced imaging and single cell sequencing (analysis), to cancer cell lines or patient-derived primary cultures to investigate molecular mechanisms of tumorigenesis and therapy resistance. We also have a project for people with advanced imaging or optical engineering background. For the dry-lab projects, the candidate can work on advanced imaging analysis including machine learning-based approaches or bioinformatics analysis (-omics data analysis).

Requirements of candidate:

- We are looking for a highly motivated, hardworking student to join our very international team. Our strength is in using team work to tackle large scientific questions and thus requires a student with good communication skills.
- Master degree or MD
- Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal)
- English language requirement:
 - o English speaking countries & Netherlands: no requirement
 - Other countries: IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs)

Department of Molecular Genetics

School/Department: Department of Molecular Genetics, Erasmus MC Supervisor information: • Dr. Hannes Lans, Associate professor DNA repair mechanisms and disease w.lans@erasmusmc.nl www.lanslab.eu Grants: **2023 2x Dutch Cancer Society (**€ 1469364) **2022** Dutch Research Council (€ 321000); **2018** 2x Dutch Research Council (€ 568000); **2017** Dutch Cancer Society (€ 534000); **2014** WorldWide Cancer Research (€ 218000); 2012 ERC FP7-PEOPLE-ITN (€ 689000); 2008 Veni grant Dutch Research Council (€ 208000). Selected publications: 2023 Recovery of protein synthesis to assay DNA repair activity in transcribed genes in living cells and tissues. Nucleic Acids Research 31:gkad642 2023 Different SWI/SNF complexes coordinately promote R-loop- and RAD52-dependent transcription-coupled homologous recombination. Nucleic Acids Research 51:9055-9074 2021 <u>Tissue-Specific DNA Repair Activity of ERCC-1/XPF-1</u>. *Cell Reports* 34:108608 Dr. Hannes Lans 2020 Ubiquitin and TFIIH-stimulated DDB2 dissociation drives DNA damage handover in nucleotide www.lanslab.eu excision repair. Nature Communications 11:4868 orcid.org/0000-0003-4417-5358 2019 The DNA damage response to transcription stress. Nature Reviews Mol Cell Biol 20:766-784 2018 DNA damage sensitivity of SWI/SNF-deficient cells depends on TFIIH subunit p62/GTF2H1. **Nature Communications** 9:4067 2018 Base and nucleotide excision repair facilitate resolution of platinum drugs-induced transcription blockage. Nucleic Acids Research 46:9537-9549 2014 Understanding nucleotide excision repair and its roles in cancer and ageing Nature Reviews Mol Cell Biol 15:465-81 Project Title: **Nucleotide Excision Repair mechanisms and disease** DNA damage is a major cause of health issues like cancer and aging. Nucleotide excision Abstract: repair (NER) is an important defense mechanism that protects cells against dysfunction by removing helix-distorting DNA damage, such as is induced by UV light and by platinum-based anticancer drugs. We study how NER functions on the molecular level C. elegans human cells and how knowledge of its function can help to prevent disease and improve cancer We investigate NER by identifying and functionally characterizing novel regulatory proteins and mechanisms. For our studies, we use both C. elegans and mammalian cell culture as model systems. We pursue a multi-disciplinary approach, using molecular cell biology and genetics (e.g CRISPR- and RNAi-mediated screening) combined with live cell imaging and quantitative proteomics, to study NER mechanisms in different cell types. We are looking for a highly motivated PhD student who wants to work on this frontline ambitious project aimed at understanding how NER protects cells from the deleterious consequences of DNA damage. The results of this project will help to better understand the molecular pathogenesis associated with inherited NER deficiency and to develop therapies aimed at alleviating discomfort associated with cancer and aging. Requirements of candidate: • The candidate should have a MSc and experience with molecular and cellular biology. • Our lab offers the PhD candidate state-of-the-art equipment and expertise to address the scientific questions stated above. Our lab consists of a mix of national and international PhD students and Postdocs and has an infrastructure that ensures intensive supervision and training during the PhD program. o Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal) English language requirement: IELTS 7.0(min 6.0 for all subs), TOEFL 100(min 20 for all subs)

Department of Pathology

School/Department:

Supervisor information:





Department of Pathology and Department of Biochemistry, Erasmus MC

Prof. dr. Tokameh Mahmoudi, PhD, t.mahmoudi@erasmusmc.nl

Selected grants: ERC StG, Health Holland, ZonMW 2019

Selected publications (* as last author):

<u>2021 Elife</u> 10:e60747. Application of human liver organoids as a patient-derived primary model for HBV infection and related hepatocellular carcinoma*

2021 Nature Communications. doi: 10.1038/s41467-021-22608-z. Selective cell death in HIV-1-infected cells by DDX3 inhibitors leads to depletion of the inducible reservoir*

<u>2021 Cell Death Dis.</u> 12(7):641. Clinical stage drugs targeting inhibitor of apoptosis proteins purge episomal Hepatitis B viral genome in preclinical models.

<u>2021 Cancer Lett.</u> 506:35-44. 3D human liver organoids: An in vitro platform to investigate HBV infection, replication and liver tumorigenesis*

2012 Cell 149(6):1245-56. Wnt pathway activation through inhibition of proteosomal bcatenin degradation within the intact endogenous Axin1 complex*

Project Title:

Main methodology and techniques 3D liver organoid cultures from healthy donor, HBV infected and hepatocellular carcinoma patients, Next generation sequencing analysis of chromatin and gene expression (ChIP-seq and RNA-seq), High resolution imaging (confocal, fluorescence microscopy), Flow Cytometry Activated Cell Sorting, Lentiviral transduction and gene editing, molecular biology and molecular virology

Lab webpage: Mahmoudilab.com

techniques.

Human liver organoid-tumoroid platform in study of HBV infection and tumorigenesis

Abstract: Persistent Hepatitis B virus (HBV) infection remains the leading cause of liver cirrhosis and hepatocellular carcinoma world-wide. However, the molecular events that occur as consequence of HBV infection and which mediate onset of hepatocellular carcinoma have remained elusive because of lack of a relevant primary untransformed model system. My group, in collaboration with the HUB has recently developed a patient-derived HBV infected human liver organoid model system (de Crignis 2021), using the adult stem cell human liver organoid/tumoroid technology (Huch 2015), which allows long term culturing and analysis of HBV infected patient or healthy donor livers providing a platform suitable for antiviral drug screening and examination of HBV-induced mechanisms of liver pathogenesis and HCC. Human liver organoids are infected with both recombinant virus as well as HBV infected patient serum and determinants of infection and viral replication are examined. We generate transgenic organoids to study the function of viral and host factors and perform drug and toxicity screens using the HBV liver organoid platform and examine the role of various pathways implicated in liver cancer such as Wnt-bcatenin (Li VS 2012), and epigenetic regulators.



Requirements of candidate:

- We are looking for a highly motivated PhD student who has received excellent scientific and practical training in the areas of Molecular Virology or Molecular Biology who also has some basic training or interest in Bioinformatics to ioin our research team.
- The student should be fluent in English (English speaking countries & Netherlands: no requirement; Other countries: IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs).
- We offer: Supervision, lab facilities and infrastructure, and training. We will cover Laboratory costs.
- As a candidate PhD student at Erasmus MC, your salary and living expenses will be covered by your University or Scholarship Council.

Department of Pharmacology

School/Department:

Supervisor information
Health Holland, ZonMW (2019)



Project Title:

Abstract: Combination antiretroviral effectively halts therapy replication and has significantly reduced AIDS-associated mortality. However, cART is not curative, it has side-effects, and apart from the costs of lifelong therapy, the global roll-out of cART, particularly in resource-limited countries, remains an ongoing challenge. HIV persists because the integrated provirus can remain in a nonproductive latent state, defined by the absence of HIV-1 gene expression. Because of this reservoir of latently HIV-1 infected cells, interruption of cART leads to a rapid rebound of unrestricted viral replication, necessitating life-long treatment. Ongoing progress in understanding the molecular mechanisms that control transcription and latency has led to the development of strategies to target the reservoir, to stimulate the virus to emerge out of latency, coupled to either induction of death in the infected reactivated cell or its immune clearance.

Department of Biochemistry, Erasmus MC

Prof. dr. Tokameh Mahmoudi, PhD, <u>t.mahmoudi@erasmusmc.nl</u>
<u>Selected personal grants:</u> ERC StG laureate (2014)
Selected publications:

- 1. Rao, S et al., 2021. Nature Communications 12(1):2475
- 2. Stoszko, M et al., 2020. Science Advances 6(32):6617-6629
- Bertoldi, A. et al., 2020 Journal of Virological Methods.
- 4. Lungu, C et al., 2020 Viruses. 12(9):E973.
- 5. Stoszko M, Ne E, et al., 2019 Current Opinion in Virology.
- 6. Zhao, M et al., 2019. Pharmacol Res. 2019 Jan;139:524-534.
- 7. Ne, E et al., 2020 bioRxiv
- 8. Marian, C et al., 2018. Cell Chemical Biology 25(12):1443-1455.e14.
- 9. Palstra, RJ et al., 2018. Science Advances 4(2):e1701729.
- 10. Stoszko M et al., 2016. EBioMedicine. 3:108-121.

HIV Cure: mechanisms, drug discovery, clinical study and valorization

We use various cell based and patient-derived models of HIV latency to screen for, identify, characterize, and clinically translate potential novel therapeutics toward HIV cure:

[1] An innovative approach to eliminate HIV-1-infected cells emerging out of latency is to pharmacologically reactivate viral expression and concomitantly trigger intracellular proapoptotic pathways in order to selectively induce cell death (ICD) of infected cells.

[2] Using a medium through-put screen of fungal metabolites combined with HIV latency reversal bioassays and state of the art fractionation coupled to MS and NMR bioassays, we identify molecules capable of activating latent HIV, characterize their mechanisms of action.
[3] The unbiased identification of factors physically associated with the latent HIV-1 provirus

would be highly valuable to unravel the molecular correlates of latency and develop new latency reversal agents. But, due to technical limitations, this has not been possible. We developed dCas9 targeted chromatin and histone enrichment strategy coupled to mass spectrometry (Catchet-MS) to isolate the latent HIV-1 promoter and identified novel and previously known factors physically associated with potentially repressing the latent LTR, and will investigate the molecular mechanisms by which they function. For one of the candidates bound, we found the FDA approved IKZF1 targeting thalidomide analogues reversed latency in CD4+T-cells isolated from virally suppressed HIV-1 infected participants.

[4] We identified the BAF complex as a central player in repressing HIV transcription, highlighting it as a potential target to reverse HIV latency. In collaboration we found that small-molecule inhibition of BAF re-activates latent HIV in a spectrum of primary models as well as in cells obtained from HIV-infected patients using drug screens. We also found macrolactam scaffold BAF inhibitors to be potentially potent latency reversal agents.



Requirements of candidate:

- We are looking for a highly motivated PhD student who has received excellent scientific and practical training in the areas of Molecular Virology or Molecular Biology who also has some basic training or interest in bioinformatics to join our research team.
- The student should be fluent in English (English speaking countries & Netherlands: no requirement; Other countries: IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs).
- We offer: Supervision, lab facilities and infrastructure, and training. We will cover Laboratory costs.
 As a candidate PhD student at Erasmus MC, your salary and living expenses will be covered by your University or Scholarship Council.

Department of Radiology & Nuclear Medicine

School/Department:	Department of Radiology and Nuclear Medicine Department of Epidemiology Erasmus MC
Supervisor information:	 Dr. Gennady Roshchupkin, g.roshchupkin@erasmusmc.nl; www.roshchupkin.org; www.bigr.nl Personal Grants: Gennady Roshchupkin is (co-Pl) of Dutch, European and USA research grants, including on NIH R01 (750 kEuro), NVIDIA research grant. He received personal VENI grants (280kEuro) and Erasmus MC fellowship award (400 kEuro). Total research funding over last 10 years is more than 5 MEuro. He has supervised 5 PhD students and >20 master students Most important publications: Hofer, E., Roshchupkin, G.V., Adams, H.H Niessen WJ Sudha Seshadri., 2020. Genetic correlations and genome-wide associations of cortical structure in general population samples of 22,824 adults. Nature Communications, 11(1), pp.1-16. Wang, J., Knol, M.J., Tiulpin, A., Dubost, F., de Bruijne, M., Vernooij, M.W., Adams, H.H., Ikram, M.A., Niessen, W.J. and Roshchupkin, G.V., 2019. Gray matter age prediction as a biomarker for risk of dementia. Proceedings of the National Academy of Sciences, 116(42), pp.21213-21218 Roshchupkin GV, Gutman BA, Vernooij MW, Jahanshad N, Martin NG, Hofman A, McMahon KL, Van Der Lee SJ, Van Duijn CM, De Zubicaray GI, Uitterlinden AG, Wright MJ, Niessen WJ, Ihompson PM, Ikram MA, Adams HHH. Heritability of the shape of subcortical brain structures in the general population. Nature Communications. 2016;7. Roshchupkin GV, Adams HHH, Vernooij MW, Hofman A, Van Duijn CM, Ikram MA, Niessen WJ. HASE: Framework for efficient high-dimensional association analyses. Scientific Reports. 2016;6. Grasby, K.L., Jahanshad, N., Painter, J.N., Colodro-Conde, L., Bralten, J., Hibar, D.P., Lind, P.A., Pizzagalli, F., Ching, C.R., McMahon, M.A.B. and Shatokhina, N., 2020. The genetic architecture of the human cerebral cortex. Science, 367(6484), p.eaay6690 van Hilten, A., Kushner, S.A., Kayser, M., Ikram, M.A., Adams, H.H., Klaver, C.C., Niess
Project Title:	Distributed Machine Learning in application for large-scale omics studies
Abstract	Artificial Intelligence field has seen dramatic advances in the past few years with much excitement around the use of deep learning (DL), many-layered convolutional neural networks (CNN). The world has witnessed striking advances in the ability of machines to understand and manipulate data, including images, language, and speech. CNN showed ability to detect a complex pattern in high-dimensional data, but also are able to integrate data from various resources by having many input channels into neural network. Human genetics can benefit immensely from DL. However, the application of AI in genetics analysis is still quite limited. The main issue is the restriction for data sharing between cohorts and loss of power, compare to the pooled analysis. Distributed Learning is a distributed machine learning approach which enables model training on a large corpus of decentralized data.
	The main goal of this project is to develop new distributed learning framework for multicenter genetics analysis in collaboration with NVIDIA company, which will be able to utilize machine learning approaches and increase power of gene discovery. We aim to apply these methods on large datasets from population-based Rotterdam study, UK Biobank as well as within world-wide genetics consortiums.
Requirements of candidate:	We are looking for a highly motivated, hardworking student to join our very international team. Successful candidates are expected to have a strong quantitative or computer science background, excel at critical thinking, with a strong motivation to engage in the development and application of advanced analytical methods. • Master degree in mathematics, computer science, statistics, bioinformatics, physics, electrical engineering, or in an equivalent discipline. • Experience with Python and Linux environment. • Experience with machine learning and deep learning methods. • Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal) • English language requirement: • English speaking countries & Netherlands: no requirement • Other countries: IELTS 7.0

選擇 ERASMUS MC 的理由

不用客氣:我們希望以您的博士生和未來的同事向您致意。我們希望您會感到賓至如歸,並在您職業 生涯的任何後續步驟中與我們合作。

您職業生涯的下一步: 在 Erasmus MC 獲得博士學位意味著您擁有 4 篇經過同行評審的國際研究發表,擁有研究發表對於您職業的下一步至關重要。在大多數大學中,他們只需要一份或更少的研究發表,因此來自 Erasmus MC 意味著巨大的優勢(有關 2019 年最後 10 名外國博士畢業生的成就,請參閱第 3 頁)。

您的培訓和教育: 我們擁有約 1,500 名科研人員,為少於 1,250 名博士生提供服務,並為約 1,000 名居民提供了約 750 名醫學專家,我們的監督率極高。更重要的是,博士生至少在 Erasmus MC 擁有 2 名導師,而且通常也可以聘請台灣導師,因為我們更願意以可以繼續在台灣進行研究的方式來培訓您。

無需學習荷蘭語: 無需學習荷蘭語-荷蘭在過去兩年中<u>英語水平排名第一</u>, 在過去十年中排名前三, 鹿特丹在荷蘭城市中排名第一。因此, 您無需講荷蘭語即可去雜貨店。

你的社交生活: 我們超過 30%的博士生是外國人,我們在 <u>Erasmus MC</u> 和 <u>Erasmus University Rotterdam</u> 以及國際辦事處都有活躍的博士生組織。居住在歐洲最大的港口城市,在《孤獨星球》(<u>Lonely Planet</u>) 2016 年的城市排名中排名第 5,這意味著您在阿姆斯特丹或安特衛普(乘汽車),布魯塞爾(乘火車),倫敦(乘飛機)或在柏林坐飛機 1.5 個小時,在巴黎坐火車 2 個小時。

我們的組織: Erasmus MC 是歐洲十大醫學院之一,也是歐盟委員會資助的臨床前、臨床和健康科學出版物的十大機構之一。我們與台灣同行的科學合作非常好,與其他外國大學相比,我們在台灣的合作質量(按平均引用/出版物表示,見右表)非常高,這在進行研究時是一個優勢合作回到台灣。此外,我們在各個臨床領域(見下表)排名世界第 11-55 位,在生物醫學科學領域排名世界第 6-48 位 (Nature Index Biomedical Sciences).

我們訓練台灣的年輕科學家希望他們能成為我們台灣下一代合作者。我們希望您能加入 Erasmus MC,並成為我們未來在荷蘭和您回到台灣後的同事,因為學位獲得後我們的聯繫不會停止。重要的, Erasmus MC 被列為久負盛名的主辦機構台灣科技部龍門計劃 因此,一旦您返回就可以發起合作。

US News Ranking 2023	World Rank
Surgery	11
Infectious Diseases	13
Gastroenterology & Hepatology	18
Microbiology	27
Endocrinology	28
Immunology	28
Social Sciences & Public Health	31
Neuroscience & Behavior	35
Public, Env & Occup Health	35
Cardiac & Cardiovasc Systems	38
Clinical Medicine	39
Radiology, Nucl Med, Med Imaging	39
Oncology	47
Pharmacology & Toxicology	55
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Nature Index Ranking	World Rank
2021 Young Universities – Life Sciencs	<u>6</u>
2019 Collaboration Big Science - Genetics	<u>13</u>
Institutional Outputs - Life Sciences	<u>19</u>
2021 Infectious Diseases	20
2019 Biomedical Sciences	<u>30</u>
2020 Cancer	48

在美國新聞網站上,鹿特丹伊拉斯姆斯大學 醫學中心在指定的學科排名中被列為前幾名

Taiwanese co-publications: domains of preclinical, clinical & health sciences 2008-2017 Source InCites 5 NOV 2021		
Foreign Institute w Taiwan	co-publ	world impact
Harvard University	1,391	9.31
Johns Hopkins University	616	14.53
Stanford University	527	12.15
UC San Francisco	493	10.21
Yale University	306	23.86
Columbia University	227	24.41
Erasmus MC Rotterdam	197	35.35
University of Cambridge	157	30.16
Cornell University	155	13.54
University of Chicago	135	8.59

Erasmus MC Taiwan information booklet 2023-2024 version 1, 12 October 2023. For questions – RDO, Research Development Office, Dr Raoul Tan – Senior Advisor International Affairs, t.tan@erasmusmc.nl, WeChat: EMC_IntAff